

In the Abstract of the Disclosure:

Please amend the Abstract of the Disclosure as follows:

A sensor package having a force sensing element and a housing. The force sensing element has an element surface, a well, a first and second shelves within the well. The housing has a housing surface. The first and second shelves of the housing are arranged to support the force sensing element so that the element surface and the housing surface are substantially coplanar and so that the element surface of the force sensing element directly senses a force without need of an actuator.

Attached hereto is a marked-up version of the changes made to the Claims by the current amendments. The attached page is captioned **“Version with markings to show changes made.”**

REMARKS

Claims 1-29 stand pending in the present application. Claims 1 – 29 stand rejected under 35 U.S.C. 112. Claims 1-5, 11, 18 and 25-29 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,040,625 to Ip (the “Ip patent”). The Office further has objected to the abstract. In this response, the Applicant has amended the Abstract for additional clarity. Further, the Applicant is submitting formal drawings of Figures 1 – 8 with this Response.

35 U.S.C. § 112 Rejections

The Office states that the use of the phrase “so that the element surface and the housing surface are substantially coplanar” in claims 1, 18 and 25 are indefinite. The phrase is definite because it structurally recites that the force sensing element has an “element surface” and that the housing has a “housing surface” so that the “element surface and the housing surface are substantially coplanar”. Such recitations are not

indefinite or vague, and find support in the specification and drawings (*see, e.g.*, Specification, p. 4, ll. 13-14, p. 4-5, l. 30 through l. 1, and Fig. 5). Those of skill in the art would be able to read the present specification and drawings to understand that a surface of the sensing element is disclosed to be coplanar (e.g., lying or acting in the same plane) with a surface of the housing.

With regard to the recitation of “so that the element surface and the housing surface face in a common direction”, the specification and drawings clearly denote that both the surface of the element and the surface of the housing must face a common direction. Thus, in one embodiment shown in Figure 5, both the element’s surface and the housing surface are oriented to face in the same direction (in the embodiment illustrated in Figure 5, both surfaces facing towards the top of the illustration). Therefore, this recitation is not indefinite or vague, and finds support in the specification and drawings.

Reconsideration is respectfully requested.

35 U.S.C. § 102 Rejections

Under Section 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim. *Gechter v. Davidson*, 116 F.3d 1454 (Fed. Cir. 1997) (emphasis added).

The Ip patent discloses a sensor die 20 vacuum sealed within a ceramic housing 40, the ceramic housing 40 having a lid 60 which covers the sensor die 20 via spring contact 36 and also covers the housing 40. *See* Ip patent, Col. 3, ll. 6-9; Fig. 1. In contrast, claim 1 of the present invention recites, among other items, a force sensing element and housing arranged “so that the element surface of the force sensing element directly senses a force” (emphasis added). The Ip patent clearly teaches away from the recitations of the present claims, as the Ip patent discloses a sensor which is vacuum enclosed within a housing and therefore, the sensor can never directly sense an applied force. Rather, the Ip patent discloses

that the sensor only senses an applied force through other elements known in the art (e.g., lid 60 and spring 36).

Moreover, claims 1, 18 and 25 of the present invention recite that the sensing element's surface and the housing surface are "substantially coplanar" (e.g., substantially lying or acting in the same plane). The Ip patent fails to teach such a recitation, and rather, teaches away from the claimed invention (*see e.g.*, Ip patent, Fig. 5A, which illustrates that sensor die 20 surface is not substantially coplanar with the housing 40, but rather, the sensor surface is seated within the housing itself), including those claims directed towards a method (claims 25-29).

As such, the Ip patent fails to be an anticipatory reference to claims 1, 18 and 25, and those claims which depend on these claims (e.g., claims 5, 11, 19-24 and 26-29).

Reconsideration is respectfully requested.

CONCLUSION

In view of the foregoing, the Applicant respectfully submits that Claims 1-29 are in condition for allowance. Reconsideration and withdrawal of the drawing objection and claim rejections are respectfully requested. The undersigned would welcome a telephone call from the Examiner in order to advance prosecution of this application. A petition to extend the time in which to respond to this office action one month is herewith also submitted with this Response.

Respectfully submitted,

Date: 11/8/01

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Abstract of the Disclosure

A sensor package [includes] having a force sensing element and a housing. The force sensing element has an element surface, a well, a first and second shelves within the well. The housing has a housing surface. The first and second shelves of the housing are arranged to support the force sensing element so that the element surface and the housing surface are substantially coplanar and so that the element surface of the force sensing element directly senses a force without need of an actuator.

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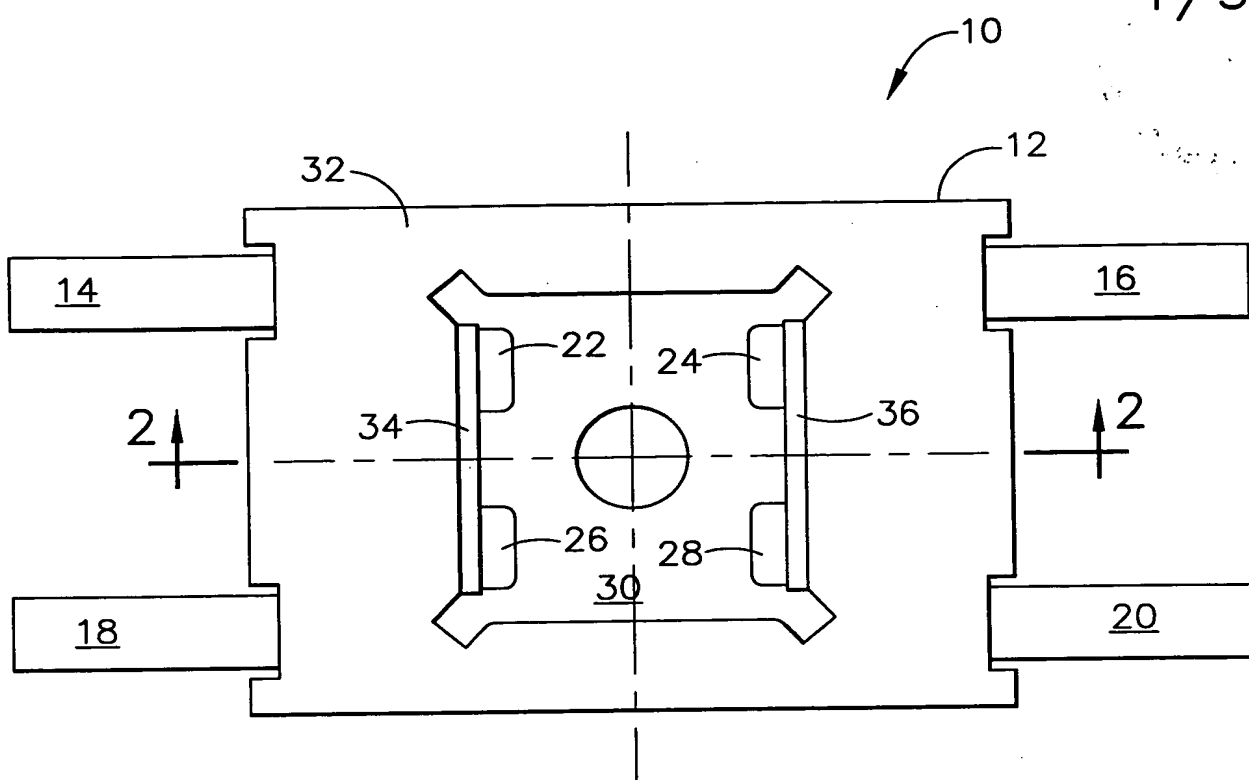


FIG. 1

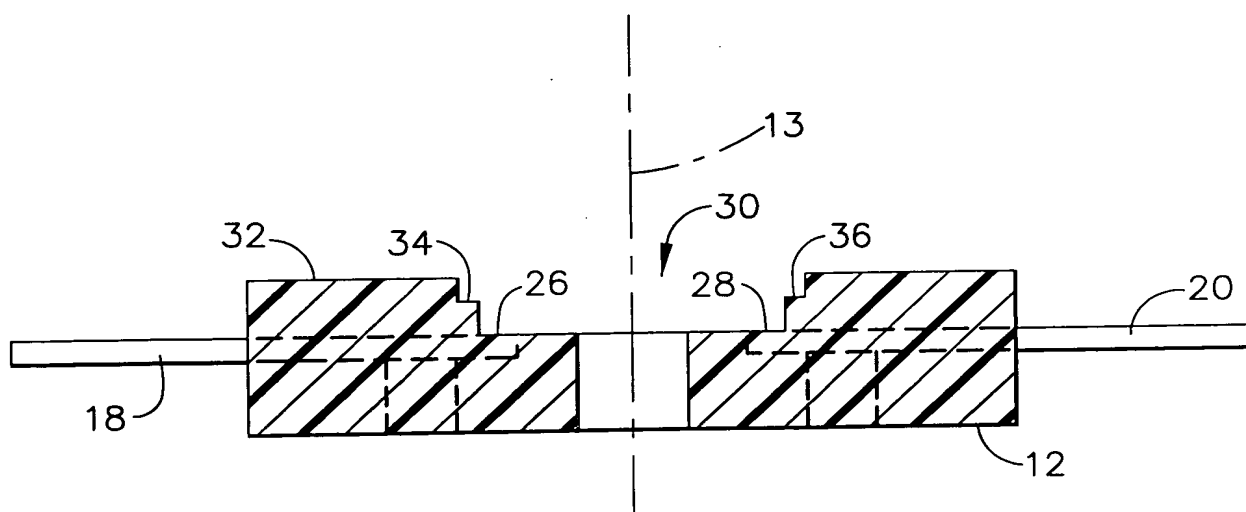


FIG. 2

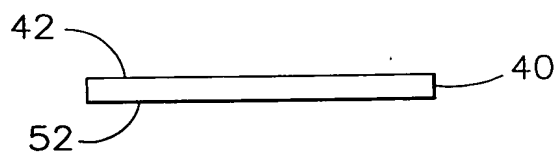


FIG. 3

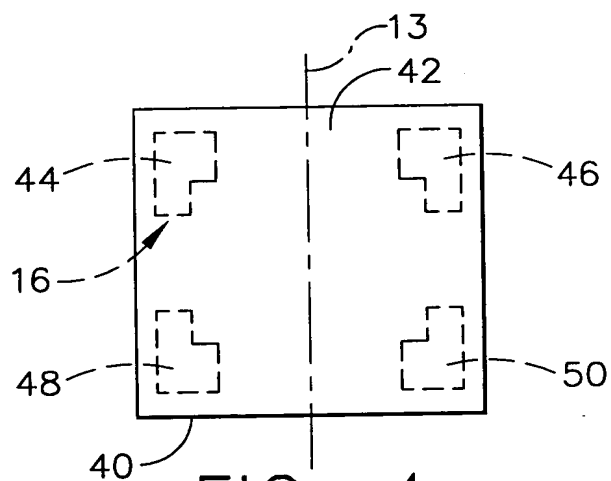


FIG. 4

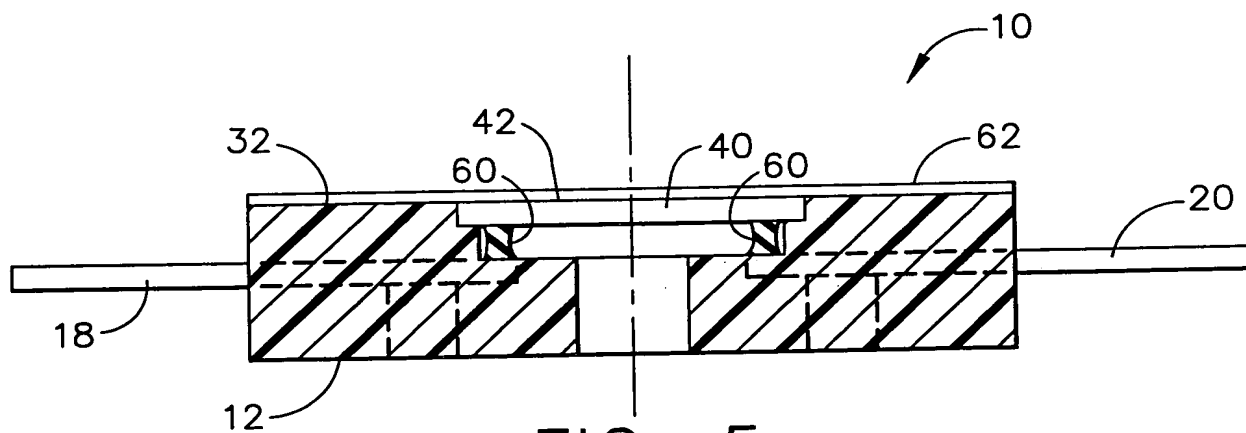


FIG. 5

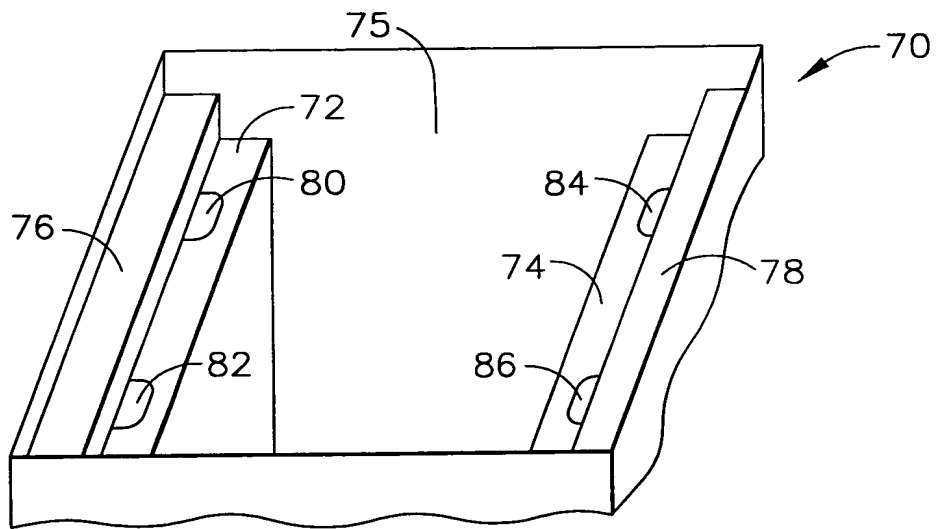


FIG. 6

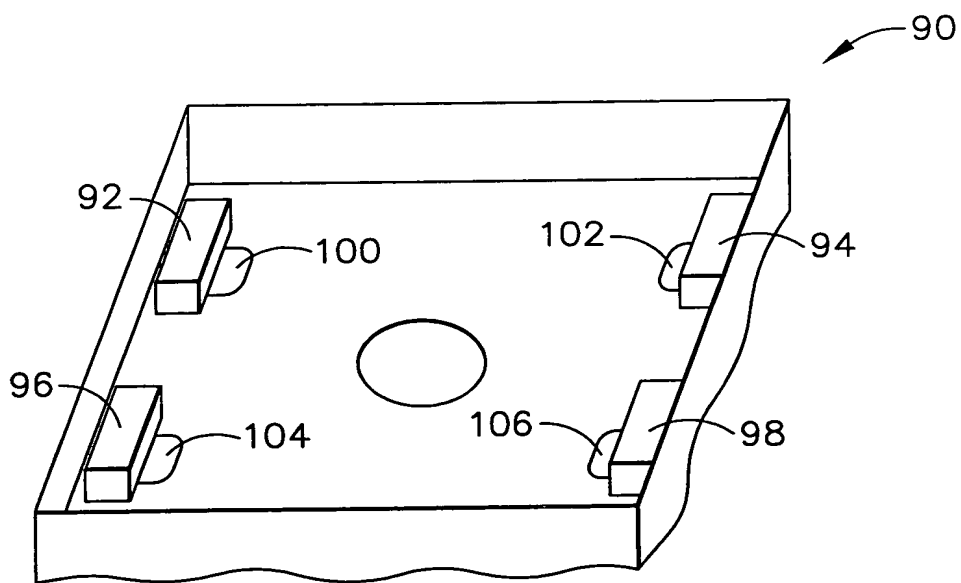


FIG. 7

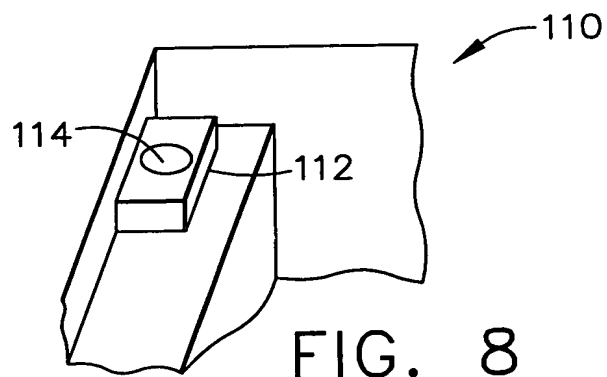


FIG. 8